Title (en)

PROCESS FOR PRODUCING NITRIDE SEMICONDUCTOR DEVICE

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER HALBLEITENDEN NITRIDVORRICHTUNG

Title (fr)

PROCEDE DE PRODUCTION D'UN DISPOSITIF A SEMI-CONDUCTEURS DE NITRURE

Publication

EP 1122841 A1 20010808 (EN)

Application

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Priority

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- JP 26362598 A 19980917
- JP 783099 A 19990114

Abstract (en)

First, the substrate temperature is set to 1020 DEG C, and an n-type cladding layer (14) made of n-type Al0.1Ga0.9N, an n-type optical guide layer (15) made of n-type GaN, and a flatness maintenance layer (16) made of n-type Al0.2Ga0.8N for maintaining the surface flatness of the n-type optical guide layer (15) by suppressing re-evaporation of the constituent atoms of the n-type optical guide layer (15), are grown in this order on a substrate (11) made of sapphire. Then, the supply of a group III material gas is stopped, the substrate temperature is decreased to 780 DEG C, and the carrier gas is switched from a hydrogen gas to a nitrogen gas. Then, an active layer (17) having a multiple quantum well structure is grown by introducing NH3 as a group V source and selectively introducing TMI and TMG as a group III source. <IMAGE>

IPC 1-7

H01S 1/00

IPC 8 full level

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